IHS Best Practice Model
Screening

Why is this important?

Type 2 diabetes has reached epidemic proportions in American Indian and Alaska Native communities. American Indians have nearly three times greater a chance of dying from diabetes and its complications than non-Hispanic whites. Yet, many people with diabetes, about 60 percent according to national estimates, remain undiagnosed. Blood vessel damage from high blood sugar can begin before diabetes is diagnosed, leading to early problems with the eyes, nerves, kidneys, and heart. Screening programs to identify people with diabetes and link them to effective treatment programs are needed in AI/AN communities.

What do we know?

Major risk factors for type 2 diabetes such as a family history of diabetes, obesity, impaired glucose tolerance, and a history of gestational diabetes are well known, and the criteria for diagnosis are established. In addition, a large clinical study, the Diabetes Prevention Program, is underway in the United States. The purpose of this study is to find out if people at high risk for type 2 diabetes can prevent or delay the onset of diabetes through lifestyle changes and/or use of medicine. If this study shows positive results, more widespread screening and prevention programs for people at risk for diabetes may be needed.

What is the scientific evidence for screening programs in American Indian/Alaska Native communities?

- Screening for Educational Opportunity
  - Foundation / Raison d'etre for all screening programs
    - Foot-in-the-door
    - Increase community awareness
- Screening for Case Finding
  - Justification
    - Organ damage precedes symptoms
    - Treatment is effective
    - Diabetes is definable
    - Specific criteria exist
    - These criteria were developed in AI/AN population
  - Strategies
    - Questionnaire -> labs
    - Physical exam / biometrics
    - Lab testing

- Criteria
  - Sensitivity/Specificity/PPV/Prevalence
  - Fasting CWBG vs FPG, FSG
  - Random CWBG vs. RPG, RSG
  - Timed pp CWBG vs. ppPG, ppSG
  - HbA1c
  - Serum insulin level
  - Time-of-day: different criteria?

What lessons have we learned about diabetes screening in AI/AN communities?

- Preparatory phase is critical to program success.
  - Pre-program assessment of community needs/attitudes/acceptable approaches
  - Limited tolerance for screening in some communities ("research fatigue," "poked & prodded", etc.)
  - Political support necessary up front
    - Identify "gatekeepers," "movers-&-shakers," those who influence/lead community attitudes & perceptions
    - Establish planning group involving all essential personnel
- Advertise prior to screening event(s)
- Pre-plan the follow-up phase
  - How to deal with positives
  - Arrangements for follow-up definitive testing
    - Dealing with those with DIABETES
      - Clinic availability, capacity
    - Dealing with those with precursor conditions (IGT)
      - Education with urgency
  - How to deal with negatives
    - Education

What can we learn from best practice models?

Issues:

- Include some follow-up;
- HIV screening programs as models: Pretest and posttest counseling;
- Adequate training for contact people (no "touch of diabetes").

Specific model programs:

- National Diabetes Education Program (NDEP)– American Indian (Level I);
- Phoenix Indian Medical Center (PIMC) (Level II);
- Colville Indian Health Clinic (Level III).

Levels for screening program:

- Level I: **Education** regarding importance of being screened; leave testing to the clinic;
- Level II: **Education plus testing**: Add Casual (random) blood sugar screens;
- Level III: **Integrated program** of screening for Diabetes and Lipids, other health assessments, and extensive education.

Goals and objectives for each level:

- Level I: Increase target population's awareness & understanding of diabetes as a potential health problem.
- Level II: Test target population.
- Interpret test result to individual tested.
- Assure confidentiality of those tested.
- Level III: Assure that definitive testing occurs.
- Evaluate related risk factors and health issues; e.g., lipids, blood pressure.

Setting up a screening program

Initial planning for a screening program involves identifying your target populations and where they may be found, assessing your community and its needs, and collecting certain data relevant to your proposed program.

Identifying your target populations:

- Entire community (reservation or urban,) [non-diabetic] population;
- Clinic users;
- Children and adolescents
- Schools
- After school programs / athletics
- Community centers
- School/sports physicals;
- Adults
- At work
- Bars
- Community events: Pow-wows, ceremonies;
- Elders
- Community / senior centers
- Elder meal sites
- Meals-on-wheels;
- Remote/isolated residents;
- Mothers
- Well child clinic
- School functions
- WIC, Head Start
- Day care centers;
- Grandparents

- Foster Grandparent Program;
- Family members of people with diabetes
- Type 1 / Type 2 / Gestational diabetes
- Work through clinic / diabetes clinic / diabetes registry;
- Previous false-positive screens;
- Previous negative screens (tickler file).

Assessing your community:
- Community **understanding** of diabetes
- Community **beliefs** about diabetes
- What level of screening is needed to fill in?
- What target groups need it most?
- For educational purposes
- For case-finding purposes?
- Registry?
- Known prevalence?
- Numerator
- Denominator
- Clinical setting for diabetes testing & treatment
- Current care acceptable?
- Process?
- Outcomes?
- Control measures / HbA1c
- Complication rates?
- Able to absorb additional workload?

Personnel needed to implement screening:
- Level I: Health Educator, HP/DP, School Nurse, CHR, CDA
- Level II: above, plus RN, LPN, RPh, PHN
- Level III: above, plus PA, CDE, FNP, PNP, MD/DO, RD

Techniques/data sources:
- Detailed interview of statistical sample, in homes: by CHR, etc., high school students, by trained interviewer;
- Telephone interviews
- RPMS, Diabetes registry, tribal enrollment, census data
- Clinic staff
- Community leaders
- Focus groups

Minimum data elements to collect during planning phase:
- Number of persons contacted in each aspect of community needs assessment;
- Sizes of relevant populations: Community population, target group populations;

- Current work loads: Persons presenting to clinic requesting diabetes screening and clinic patient volume.

What data will you need to collect during the program ?

Level I:

- Number of ads run: TV, radio, newspaper;
- Number of persons receiving diabetes education at schools, community functions, health fairs, etc.;
- Number of people presenting to health care facility for testing for diabetes screening;
- Number of persons diagnosed with diabetes;
- Clinic work load.

Level II: All Level I elements, plus:

- Number of persons receiving pre-test counseling;
- Number of persons screened (in each target group) for glucose, blood pressure, and cholesterol;
- Number of persons receiving post-test counseling;
- Number of people referred for diagnostic testing;
- Number of persons attending diabetes education programs supported by the screening program.

Level III: All Level I and Level II elements, plus:

- Number of persons diagnosed with diabetes precursor conditions

Insulin Resistance	IGT
IFG	Dyslipidemia

- Number of persons receiving individual diabetes education

by CDE	by RN
by RD	by R.Ph.
by exercise trainer	by MD/DO/NP/PA
by other……	

Evaluating your program: What progress indicators should you look for?

- Written (narrative) plan for screening program, signed by appropriate council members and involved medical staff.
- Receipts for equipment and supplies purchased or rented for program use.
- Evidence of actual use of such equipment and supplies for program purposes such as glucose meters, lancets, test strips, alcohol, bandages, Blood pressure cuffs, stethoscopes, anthropometric equipment, cholesterol testing machine and strips, phlebotomy supplies, and laboratory equipment.
- Copy of ads, PSA's, etc. used to announce the screening program or for community awareness.
- Informational materials and incentives (prizes, food) distributed.
- For programs involving minors: Informed consent from parents.